

### **REMARKS**

The Office Action mailed August 12, 2008 has carefully considered by Applicant. Reconsideration is requested in view of the foregoing amendments to the claims, the Terminal Disclaimer submitted herewith, and the remarks that follow.

#### **Double Patenting**

Claims 1-6, 9 and 10 have been rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 7,228,871. Herewith, Applicant submits a Terminal Disclaimer in compliance with 37 CFR §1.321. The rejection based upon non-statutory obviousness-type double patenting is therefore believed overcome, in accordance with the indication of such on page 3 of the Office Action.

#### **Claim Rejections Under 35 U.S.C. §103**

Claims 1-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Muller U.S. Patent No. 6,852,145 in view of Maher et al U.S. Patent No. 3,108,447.

The claims have been amended to more particularly point out and distinctly claim the subject matter of the invention and to render the same allowable over the applied references.

In particular, claims 1, 3 and 10 have been amended to indicate that the upper part of the downcomer defines a flow path having a cross sectional area perpendicular to the direction of flow that is substantially unreduced or substantially constant. According to these embodiments, when oil flows down the downcomer, the gravitational force seeks to increase the falling velocity in the downcomer and gives rise to a reduced total pressure at the upper part of the downcomer. Gas located in the upper section of the storage or transport tank will then be drawn through the gas pipe connected to the flow path of the upper part of the downcomer and connected to the upper section of the tank.

Neither of the cited references teaches or suggests this aspect. As stated by the Examiner on page of the Office Action, Muller '145 fails to teach or suggest the use of a constant diameter downcomer tube. Muller '145 fails to teach or suggest the claimed

upper part that defines a flow path having a cross sectional area that is perpendicular to the direction of flow that is substantially unreduced or substantially constant.

Maher et al '447 teaches a system for refrigeration by direct vapor condensation. Sub-cooled liquid enters the top of a condenser 20 of constant cross section, through a pipe 18 and vapor enters the condenser 20 through a coaxial vapor pipe 26. The condenser 20 includes a diffuser baffle 24 and baffle trays 22, 23. The working principle of Maher et al '447 is discussed in column 2, lines 47-56. Vapor is drawn through the T-shaped vapor withdrawal means in order to replace the vapor that is condensed in the condenser. Condensation is achieved by mixing the sub-cooled liquid and the inflowing vapor. The diffuser baffle serves to prevent flow of circulating liquid directly in the vapor pipe, column 2, lines 35-36, while the baffle trays are provided to provide maximum contact time and surface between vapor and liquid, column 2, lines 51-54. Although the condenser has a constant outside cross section, due to the baffles, it certainly does not define a flow path having a cross sectional area perpendicular to the direction of flow that is substantially unreduced or substantially constant.

It also follows that both the working principle and the technical features of the condenser according to Maher et al '447 are completely different than the working principle and technical features of the present application. The baffle plates of Maher et al '447 would be completely detrimental to the flow in a downcomer working on the velocity principle described and claimed in the present application.

As such, the claims are believed allowable over the cited references, including Muller '145 and Maher et al '447.

#### Claim 1

Claim 1 recites, in particular, "*wherein the upper part of the downcomer, which part defines a flow path having a cross sectional area perpendicular to the direction of flow that is substantially unreduced*". This aspect is neither taught nor suggested by the references, as discussed above.

Claim 2

Claim 2 depends from claim 1 and is thus believed allowable for the reasons stated above, as well as the detailed subject matter recited therein.

Claim 3

Claim 3 recites that the upper part is located at a predetermined height above the upper section of the tank and "*defining a flow path having a substantially constant cross sectional area perpendicular to the direction of flow*".

As discussed above, this aspect is neither taught nor suggested by the cited references.

Claims 4-9

Claims 4-9 depend directly or indirectly from claim 3 and are thus believed allowable for the reasons stated above, as well as the detailed subject matter recited therein.

Claim 10

Claim 10 recites a method that includes causing oil to flow in an upper part of a downcomer that is located at a predetermined height above the storage or transport tank. The downcomer defines "*a flow path having a substantially constant cross sectional area perpendicular to the direction of flow*".

As discussed above, this aspect is neither taught nor suggested by the cited references.

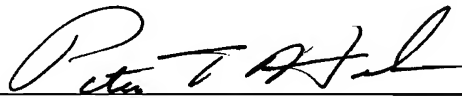
Application No. 10/540,355  
Amendment Dated December 2, 2008  
Reply to Office Action of August 12, 2008

Conclusion

The present application is therefore believed in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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